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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/566,788   | 06/01/2006  | Dimitris Katsoulis   | DCC-10702/50 22     | 7734             |
| 25/06 7590 04/01/2009<br>GIFTORD, KRASS, SPRINKLE, ANDERSON & CITKOWSKI, P.C<br>PO BOX 7021<br>TROY, MI 48007-7021 |             |                      |                     |                  |
| EXAMINER<br>NAKARANI, DHIRAJLAL S  |             |                      |                     |                  |
| ART UNIT   |             | PAPER NUMBER         |                     |                  |
| 1794   |             |                      |                     |                  |
| MAIL DATE  |             | DELIVERY MODE        |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/566,788

**Applicant(s)**

KATSOULIS ET AL.

**Examiner**

D. S. Nakanari

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date 05/01/2006 & 12/15/2008
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Claim 1**, lines 4-5, the markush group "selected from the group consisting of ----  
---or a combination of the above" is improper. The changing the word "or" to the word --  
and -- may overcome the rejection;

Lines 6-7, the markush group "selected from -----and arylamino radicals" is improper. The changing the word "and" to the word -- or -- may overcome the rejection; and the subscript "n" of the structural formula in line 3 is not defined. Therefore in absence of definition of the subscript "n" claims are indefinite.

**Claim 2**, the subscript "n" of the structural formula in line 3 is not defined. Therefore in absence of definition of the subscript "n" claims are indefinite,

lines 4-5, the markush group "selected from the group consisting of -----or a combination of the above" is improper. The changing the word "or" to the word -- and -- may overcome the rejection and

line 6, the markush group "selected from -----and arylamino radicals" is improper. The changing the word "and" to the word -- or -- may overcome the rejection.

**Claim 4**, the subscript "n" of the structural formula in line 2 is not defined. Therefore in absence of definition of the subscript "n" claims are indefinite.

**Claim 10**, lines 6-7, the markush group "selected from the group consisting of ----or a combination of the above" is improper. The changing the word "or" to the word -- and -- may overcome the rejection;

lines 8-9, the markush group "selected from -----and arylamino radicals" is improper. The changing the word "and" to the word -- or -- may overcome the rejection; and the subscript "n" of the structural formula in line 5 is not defined. Therefore in absence of definition of the subscript "n" claims are indefinite.

**Claim 11**, the subscript "n" of the structural formula in line 3 is not defined. Therefore in absence of definition of the subscript "n" claims are indefinite,

lines 4-5, the markush group "selected from the group consisting of -----or a combination of the above" is improper. The changing the word "or" to the word -- and -- may overcome the rejection and

line 6, the markush group "selected from -----and arylamino radicals" is improper. The changing the word "and" to the word -- or -- may overcome the rejection.

**Claim 13**, the subscript "n" of the structural formula in line 2 is not defined. Therefore in absence of definition of the subscript "n" claims are indefinite.

**Claims 5 and 14**, the phrase "the silicone composition comprises a silsesquioxane of the formula:  $R^1_a R^2_b R^3_c SiO_{(4-a-b-c)/2}$ " renders claims confusing because claim 5 depends from claim 1 which requires a silicone composition of the formula:  $[R_x SiO_{(4-x)/2}]_n$  wherein the definition R does not include monovalent hydrocarbon groups having aliphatic unsaturation.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-8, 10-17 and 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nozue et al (U. S. Patent 4,626,556) in view of Yagihashi (U. S. Patent 6,340,735 B1), Aiba et al (U. S. Patent 5,183,846), Linde et al (U. S. Patent 5,043,789) and Li et al (U. S. Patent Application Publication US 2003/0171476 A1).

Nozue et al disclose a coating on aluminum plate of organopolysilsesquione ladder polymer having alkyl, alkenyl and/or aryl groups (See claims 1-7, col. 8, lines 14-19 and Example 17 with reference to Examples 3, 13 and 14). Nozue et al fail to

disclose organopolysilsesquioxane having hydroxyl groups and alkylamide, arylamide etc groups and containing claimed colloidal silica particles.

Yagihashi discloses a poly(phenylsilsesquioxane) ladder polymer coated on a silicon wafer having deposited metallic aluminum. The coating has high planarity, is 0.1 to 10 microns thick and has dielectric constant of about 2.0 to about 2.6 (Claim1; col. 2, lines 57-67; col. 6, lines 1-17 and example 2).

Aiba et al disclose a silicon ladder polymer with alkyl, aryl, vinyl as well as silanol groups coated on aluminum clad silicon wafer.

Linde et al disclose a planarizing silsesquioxane copolymer coating having aminoalkoxysilane monomer (Abstract).

Li et al disclose a silsesquioxane polymer containing claimed colloidal silica particles for high fracture toughness and strength (Paragraphs [0015], [0028] and [0029]).

Therefore it would have been obvious to a person of ordinary skill in the art at the time of this invention made to utilize disclosure of Yagihashi, Aiba et al, Linde et al and Li et al in the invention of Nozue et al to optimize coating composition for desired adhesion, strength and dielectric constant for the given application.

6. Claims 9 and 18 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Claims 9 and 18 are deemed allowable because art of record do not teach or suggest claimed silicone composition the claimed formula.

7. Receipt of Information Disclosure Statements filed May 01, 2006 and December 15, 2008 is acknowledged and all recited documents have been made of record.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. S. Nakarani whose telephone number is (571) 272-1512. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/D. S. Nakarani/  
Primary Examiner, Art Unit 1794**

DSN  
March 29, 2009.